CLAIMS

What is claimed is:

1. A sensor comprising:

one or more light-projecting components irradiating light from one or more light-projecting surfaces; and

one or more light-receiving components receiving at least a portion of the light irradiated from at least one of the light-projecting component or components, the received light being incident on one or more light-receiving surfaces after having been reflected;

the sensor detecting one or more objects in one or more overlapping zones at which at least one projected light optical path of the light irradiated by at least one of the light-projecting component or components at least partially overlaps at least one received light optical path of the light incident on at least one of the light-receiving component or components;

the sensor further comprising:

one or more optical path varying means varying at least one of the projected light optical path or paths and/or at least one of the received light optical path or paths so as to physically vary at least one of the overlapping zone or zones;

at least one of the optical path varying means carrying out adjustment of optical sensitivity by increasing at least one extent of at least one of the overlapping zone or zones when carrying out detection with respect to at least one distant zone and/or decreasing at least one extent of at least one of the overlapping zone or zones when carrying out detection with respect to at least one proximate zone.

2. A sensor according to claim 1 wherein:

at least one of the optical path varying means is such that one or more translucent curved bodies is or are disposed in at least one of the projected and/or received light optical path or paths;

at least one of the translucent curved body or bodies comprises one or more flat components and one or more curved components formed in continuous fashion;

at least one of the light-projecting component or components and at least one of the

light-receiving component or components are arrayed in the same order as at least one of the flat component or components and at least one of the curved component or components formed in continuous fashion; and

when carrying out detection with respect to at least one distant zone, at least one of the light-projecting component or components and at least one of the light-receiving component or components are made to move and/or rotate from at least one of the flat component or components and toward at least one of the curved component or components while maintaining at least one distance between at least a portion of the light-projecting and light-receiving surfaces of the light-projecting and light-receiving components.

3. A sensor according to claim 1 wherein:

at least one of the optical path varying means is such that one or more prismatic bodies is or are disposed in at least one of the projected and/or received light optical path or paths;

at least one of the prismatic body or bodies presenting gradually increasing angle or angles as one goes from at least one side thereof to at least one other side thereof;

at least one of the light-projecting component or components and at least one of the light-receiving component or components are arrayed in the same order as the at least one side thereof and the at least one other side thereof; and

when carrying out detection with respect to at least one distant zone, at least one of the light-projecting component or components and at least one of the light-receiving component or components are made to move and/or rotate from the at least one side thereof and toward the at least one other side thereof while maintaining at least one distance between at least a portion of the light-projecting and light-receiving surfaces of the light-projecting and light-receiving components.

4. A sensor according to claim 1 wherein:

at least one of the optical path varying means is such that one or more mirror bodies is or are disposed in at least one of the projected and/or received light optical path or paths;

at least one of the mirror body or bodies comprises one or more flat components and one or more curved components formed in continuous fashion;

at least one of the light-projecting component or components and at least one of the

light-receiving component or components are arrayed in the same order as at least one of the flat component or components and at least one of the curved component or components formed in continuous fashion; and

when carrying out detection with respect to at least one distant zone, at least one of the light-projecting component or components and at least one of the light-receiving component or components are made to move and/or rotate from at least one of the flat component or components and toward at least one of the curved component or components while maintaining at least one distance between at least a portion of the light-projecting and light-receiving surfaces of the light-projecting and light-receiving components.

5. A sensor according to claim 1 wherein:

at least one of the optical path varying means is such that one or more rotatable shafts for rotating at least one of the light-projecting component or components and at least one of the light-receiving component or components is or are disposed between at least one of the light-projecting component or components and at least one of the light-receiving component or components; and

when carrying out detection with respect to at least one distant zone, at least one of the light-projecting component or components and/or at least one of the light-receiving component or components is or are rotated in at least one direction such as would tend to increase the degree to which at least one of the light-projecting surface or surfaces faces at least one of the light-receiving surface or surfaces.